

# Metal Industry Indicators

## Indicators of Domestic Primary Metals, Steel, Aluminum, and Copper Activity

October 1999

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**September marked the fifth consecutive month that the primary metals leading index has registered a strong growth rate, signaling a continuation of growth in overall U.S. primary metals activity into the near future. Although the metals price leading index declined in August for the first time since last April, other indicators, such as declining growth in metal inventories, suggest the possibility of increases for some metal prices in the near term.**

A preliminary calculation of the **primary metals leading index** shows it increasing 1.3% in September to 131.3, up from a revised 129.6 in August. The index's 6-month smoothed growth rate, a compound annual rate that measures the near-term trend, also moved higher, up to 6.3% from 4.1% in August. A growth rate above +1.0% is usually a sign of an upward near-term trend for future metals activity.

Four of the index's eight components were available in time for the September index calculation. The component for the Purchasing Managers' Index, which reached its highest level since November 1994, and the indicator measuring the length of the average workweek in primary metals establishments registered strong increases. The growth rate of the Journal of Commerce metals price index also increased, but the S&P stock price index for diversified machinery companies posted a decrease. The growth rate of the primary metals leading index continues to signal moderate near-term growth in activity for the U.S. primary metals industry. However, growth in the September leading index may be revised lower when the other four components of the index become available.

The **steel leading index** gained 0.6% in August, the latest month for which it is available, increasing to 113.2 from a revised 112.5 in July, while the index's 6-month smoothed growth rate moved up to 5.0% from a revised 4.6% in July. The components for industrial production of automotive products and the growth rate of the steel scrap price made the largest positive contributions to the net increase in the leading index. The growth rate of the steel leading index continues to point to increased growth in U.S. steel industry activity in the near future.

The **aluminum mill products leading index** edged down 0.1% in August, dipping to 158.1 from a revised 158.3 in July, and the index's 6-month smoothed growth rate decreased to 2.7% from a revised 3.7% in July. Five of the index's seven components moved lower in August, led by declines in the length of the average workweek in aluminum mill products establishments, the

growth rate of the inflation-adjusted value of M2 money supply, and new orders for aluminum mill products. The index decline would have been much larger had it not been for a large increase in one component, industrial production of automotive products. The 6-month smoothed growth rate of the leading index continues to suggest growth in domestic aluminum mill products activity in the coming months.

The **primary aluminum leading index** advanced 0.7% in August to 91.8 from a revised 91.2 in July, while the index's 6-month smoothed growth rate moved up to 5.9%, its second highest rate since November 1994. The largest contributions to the net increase in the leading index came from the trade-weighted average exchange value of other major currencies against the U.S. dollar and the S&P stock price index for aluminum companies. The primary aluminum leading index continues to signal increased demand for primary aluminum in the coming months. (Tables and charts for the primary aluminum indexes are in a separate file.)

The **copper leading index** decreased 0.4% in August to 132.5 from a revised 133.0 in July, and the index's 6-month smoothed growth rate eased to 3.9% from a revised 5.2% in July. Declines in the S&P stock price index for building materials companies and the inflation-adjusted value of new orders for nonferrous and other primary metals accounted for most of the downward pressure on the leading index. The growth rate of the copper leading index remains in the range that signals increasing near-term demand for copper in the United States, however, high inventory levels and foreign competition may limit growth in domestic copper activity.

### U.S. Economic Indicators Push Leading Index of Metal Prices Lower

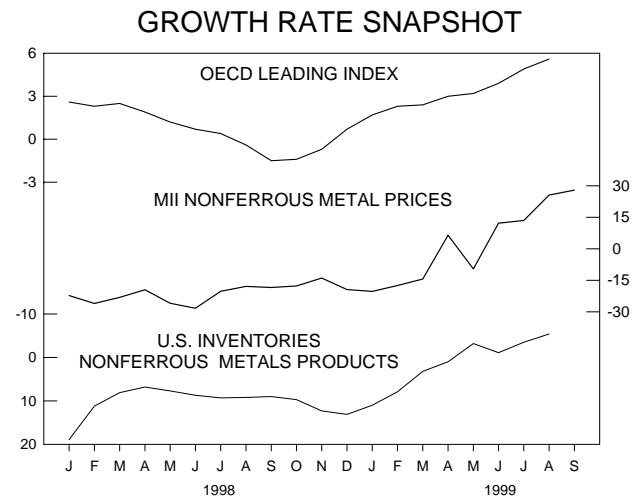
The **metals price leading index** dropped 0.7% in August, the latest month for which it is available, to 97.8 from a revised 98.5

in July. The index's 6-month smoothed growth rate also fell, slipping to 0.0% from a revised 1.5% in July. Two of the index's four components, the growth rates of the inflation-adjusted value of new orders for U.S. nonferrous and other primary metals and the inflation-adjusted value of U.S. M2 money supply, were down sharply and were responsible for most of the net decline in the leading index. The growth rate of building permits for new U.S. housing also moved lower. In contrast, the fourth component in the metals price leading index, the growth rate of the OECD total leading index, increased for the eleventh consecutive month.

The 6-month smoothed growth rate of the inflation-adjusted value of U.S. nonferrous metal products inventories fell to -5.4% in August from -3.5% in July, its lowest growth rate since February 1995.

Another indicator that sometimes points to changes in metal prices is the reciprocal of the trade-weighted exchange value of the U.S. dollar against major foreign currencies. An index measuring this has been rising recently as the value of the U.S. dollar has declined relative to other major currencies. This

indicator and the OECD total leading index, which both reflect major changes in the global economy suggest higher metal prices in the near future.



**Table 1.**  
**Leading Index of Metal Prices and Growth Rates of the Nonferrous Metals Price Index, Inventories of Nonferrous Metal Products, and Selected Metal Prices**

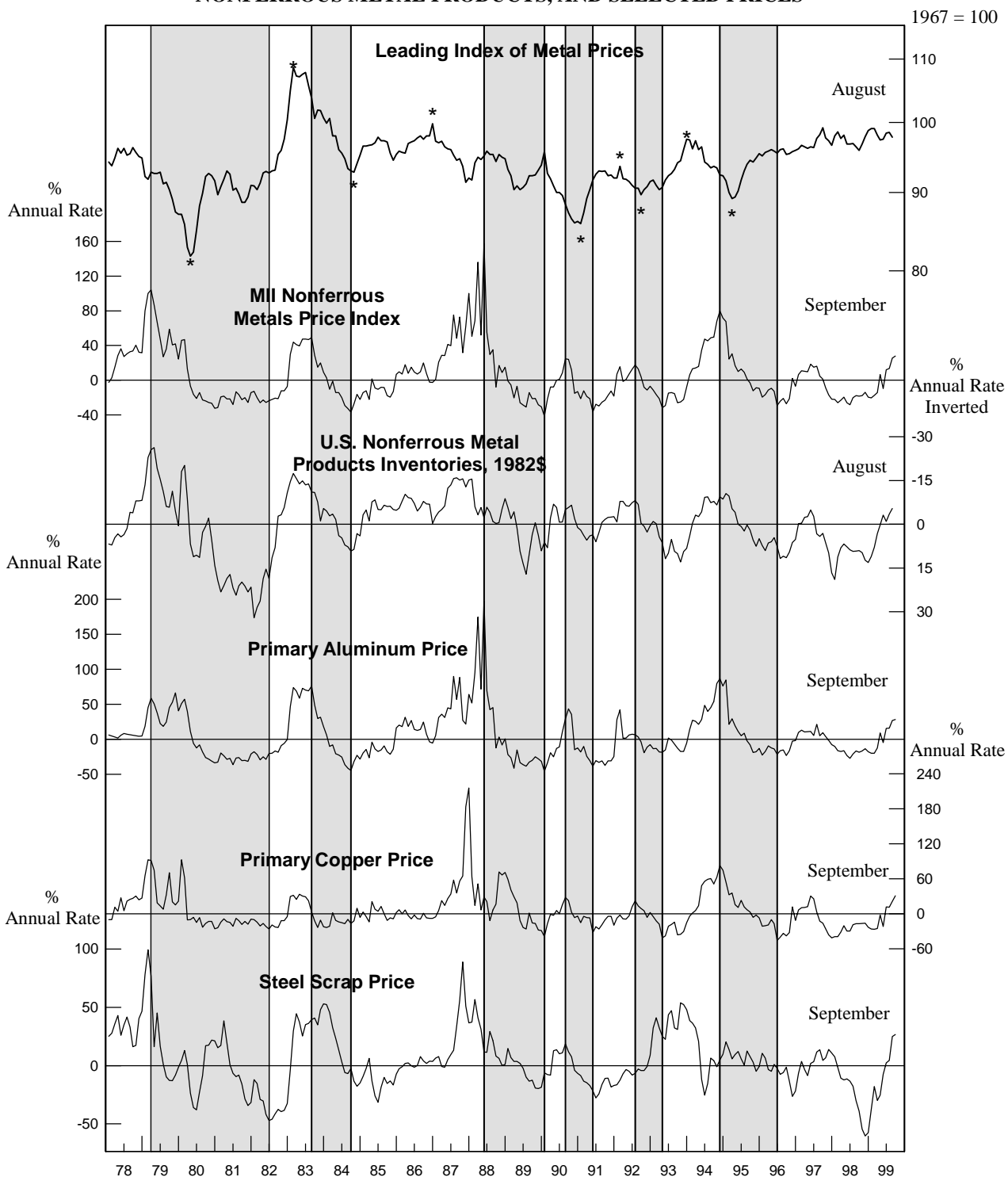
Six-Month Smoothed Growth Rates						
	Leading Index of Metal Prices (1967=100)	MII Nonferrous Metals Price Index	U.S. Nonferrous Metal Products Inventories (1982\$)	Primary Aluminum	Primary Copper	Steel Scrap
<b>1998</b>						
August	96.4	-17.9	9.2	-17.1	-16.8	-30.0
September	95.9	-18.4	9.0	-18.6	-16.9	-39.0
October	96.8	-17.7	9.7	-16.8	-16.5	-54.5
November	97.9	-13.9	12.3	-13.5	-15.9	-60.2
December	98.8	-19.4	13.1	-18.0	-23.0	-57.4
<b>1999</b>						
January	99.1r	-20.3	11.0	-20.2	-26.0	-37.5
February	99.1r	-17.5	7.9	-20.2	-26.4	-17.8
March	98.1r	-14.4	3.2	-12.6	-25.1	-29.8
April	97.4	6.5	0.2r	8.8	-1.7	-25.3
May	97.5r	-9.6	-3.1r	-4.9	-21.7	-7.6
June	98.4r	12.2	-1.0r	15.3	11.7	2.2
July	98.5r	13.5	-3.5	15.8	11.4	4.4
August	97.8	25.6	-5.4	26.7	21.7	24.9
September	NA	27.9	NA	28.0	31.0	26.6

NA: Not available    r: Revised

**Note:** The components of the Leading Index of Metal Prices are the 6-month smoothed growth rates of the following: 1, the deflated value of new orders for nonferrous metals; 2, the OECD leading index, total; 3, the index of new private housing units authorized; and 4, the deflated value of U.S. M2 money supply. The Metal Industry Indicators (MII) Nonferrous Metals Price Index measures changes in end-of-the-month prices for primary aluminum, copper, lead, and zinc traded on the London Metal Exchange (LME). The steel scrap price used is the price of No. 1 heavy melting. Inventories consist of the deflated value of finished goods, work in progress, and raw materials for U.S.-produced nonferrous metals and nonferrous metal products. Six-month smoothed growth rates are based on the ratio of the current month's index or price to its average over the preceding 12 months, expressed at a compound annual rate.

**Sources:** U.S. Geological Survey (USGS); American Metal Market (AMM); the London Metal Exchange (LME); the Bureau of the Census; and the Organization for Economic Cooperation and Development (OECD).

**CHART 1.**  
**LEADING INDEX OF METAL PRICES AND GROWTH RATES**  
**OF NONFERROUS METALS PRICE INDEX, INVENTORIES OF**  
**NONFERROUS METAL PRODUCTS, AND SELECTED PRICES**



Shaded areas are downturns in the nonferrous metals price index growth rate. Asterisks (\*) are peaks and troughs in the economic activity reflected by the leading index of metal prices. Scale for nonferrous metal products inventories is inverted.

**Table 2.**  
**The Primary Metals Industry Indexes and Growth Rates**

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
<b>1998</b>				
October	124.7	-4.8	110.2	-2.6
November	126.1	-2.2	109.6	-3.4
December	125.1	-3.2	109.6	-3.0
<b>1999</b>				
January	126.1	-1.5	110.1	-1.8
February	126.5	-0.5	109.8	-1.9
March	126.9	0.4	111.1	0.6
April	127.6	1.8	110.8	0.2r
May	129.0r	4.0r	111.3	1.4r
June	129.6r	4.9r	111.8r	2.2r
July	129.5r	4.4r	113.0r	4.2r
August	129.6r	4.1	113.0	3.7
September	131.3	6.3	NA	NA

*NA: Not available    r: Revised*

**Note:** Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

**Table 3.**  
**The Contribution of Each Primary Metals Index Component to the Percent Change in the Index from the Previous Month**

<b>Leading Index</b>	<b>August</b>	<b>September</b>
1. Average weekly hours, primary metals (SIC 33)	-0.1r	0.7
2. S&P stock price index, machinery, diversified	0.1	-0.4
3. Ratio of price to unit labor cost (SIC 33)	0.3	NA
4. JOC metals price index growth rate	0.1r	0.2
5. New orders, primary metals, (SIC 33) 1982\$	-0.1	NA
6. Index of new private housing units authorized by permit	-0.1	NA
7. Growth rate of U.S. M2 money supply, 1992\$	-0.3	NA
8. Purchasing Managers' Index	0.1r	0.8
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	0.0r	1.3
<b>Coincident Index</b>	<b>July</b>	<b>August</b>
1. Industrial production index, primary metals (SIC 33)	0.3r	0.1
2. Total employee hours, primary metals (SIC 33)	0.5	-0.3
3. Value of shipments, primary metals, (SIC 33) 1982\$	0.1r	0.1
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	1.0r	0.0

**Sources:** Leading: 1, Bureau of Labor Statistics; 2, Standard & Poor's; 3, Center for International Business Cycle Research, Bureau of Labor Statistics, and Federal Reserve Board; 4, Journal of Commerce; 5, Bureau of the Census and U.S. Geological Survey; 6, Bureau of the Census and U.S. Geological Survey; 7, Federal Reserve Board, Conference Board, and U.S. Geological Survey; and 8, National Association of Purchasing Management. Coincident: 1, Federal Reserve Board; 2, Bureau of Labor Statistics and U.S. Geological Survey; 3, Bureau of the Census and U.S. Geological Survey. All series are seasonally adjusted, except 2, 3, and 4 of the leading index.

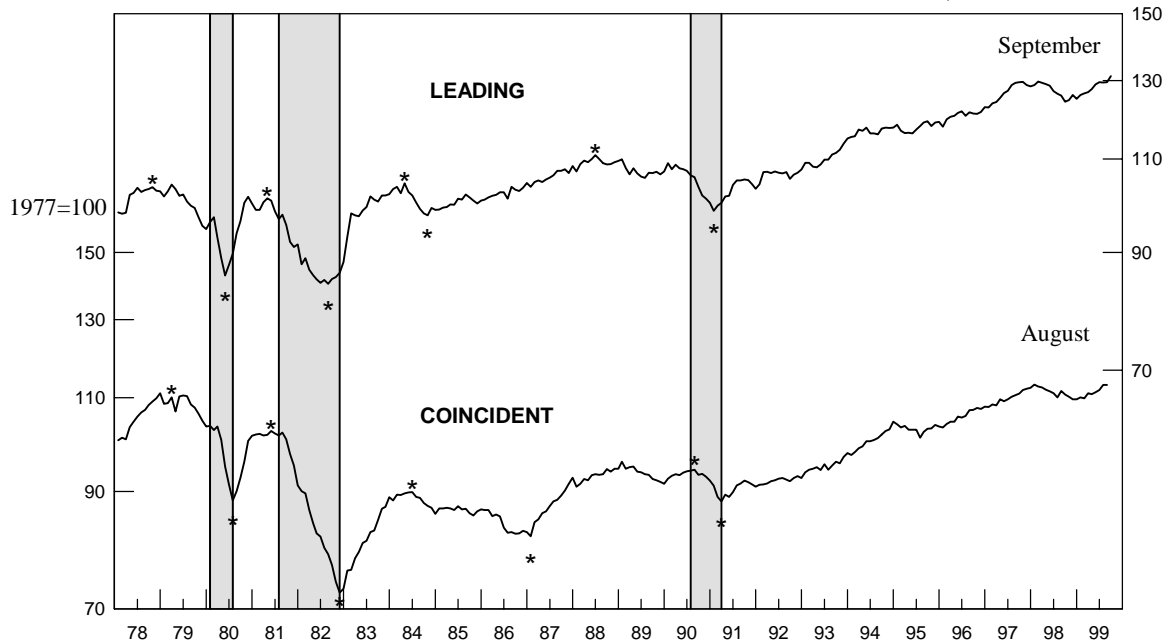
*NA: Not available    r: Revised*

**Note:** A component's contribution, shown in Tables 3, 5, 7, and 9, measures its effect, in percentage points, on the percent change in the index. Each month, the sum of the contributions plus the trend adjustment equals (except for rounding differences) the index's percent change from the previous month.

**CHART 2.**

**PRIMARY METALS: LEADING AND COINCIDENT INDEXES, 1978-99**

1977=100

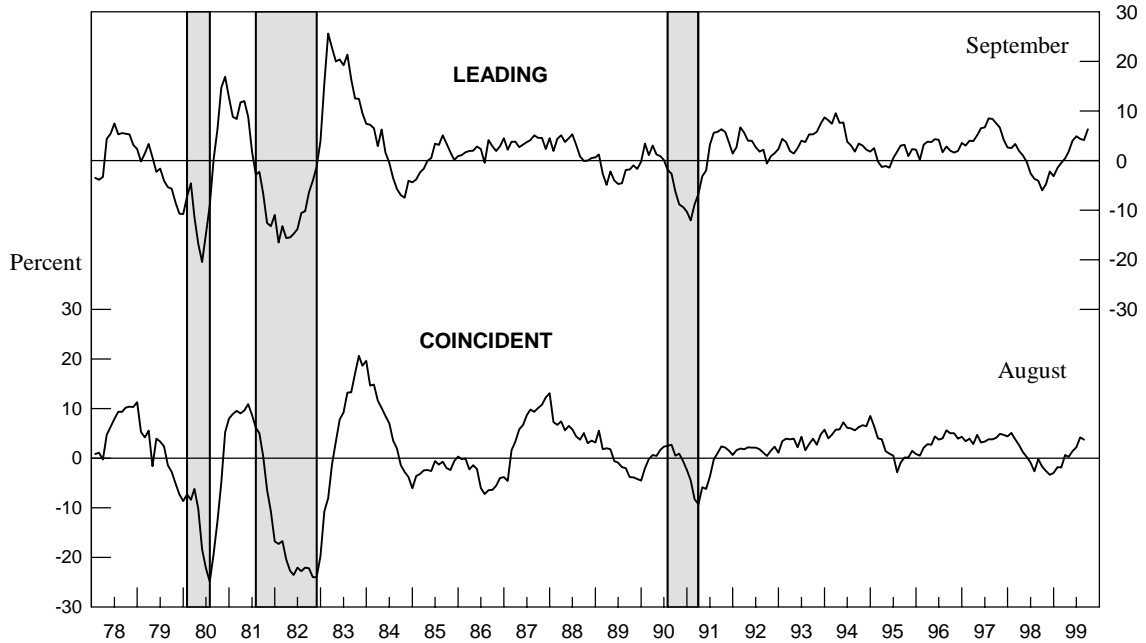


Shaded areas are business cycle recessions. Asterisks (\*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

**CHART 3.**

**PRIMARY METALS: LEADING AND COINCIDENT GROWTH RATES, 1978-99**

Percent



Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

**Table 4.**  
**The Steel Industry Indexes and Growth Rates**

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
<b>1998</b>				
September	107.6	-5.1	98.0	-4.1
October	107.7	-4.4	97.5	-4.6
November	108.9	-2.0	96.5	-6.0
December	108.3	-2.6r	96.7	-5.2
<b>1999</b>				
January	110.0	0.6	97.2	-3.7
February	111.8	3.9	97.3	-2.8
March	110.5	1.7r	98.4	-0.2
April	111.5	3.6	98.7	0.7r
May	112.6r	5.5r	99.3	2.0
June	113.1r	6.1r	99.5	2.6r
July	112.5r	4.6r	100.4r	4.2r
August	113.2	5.0	100.7	4.7

*r: Revised*

**Note:** Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

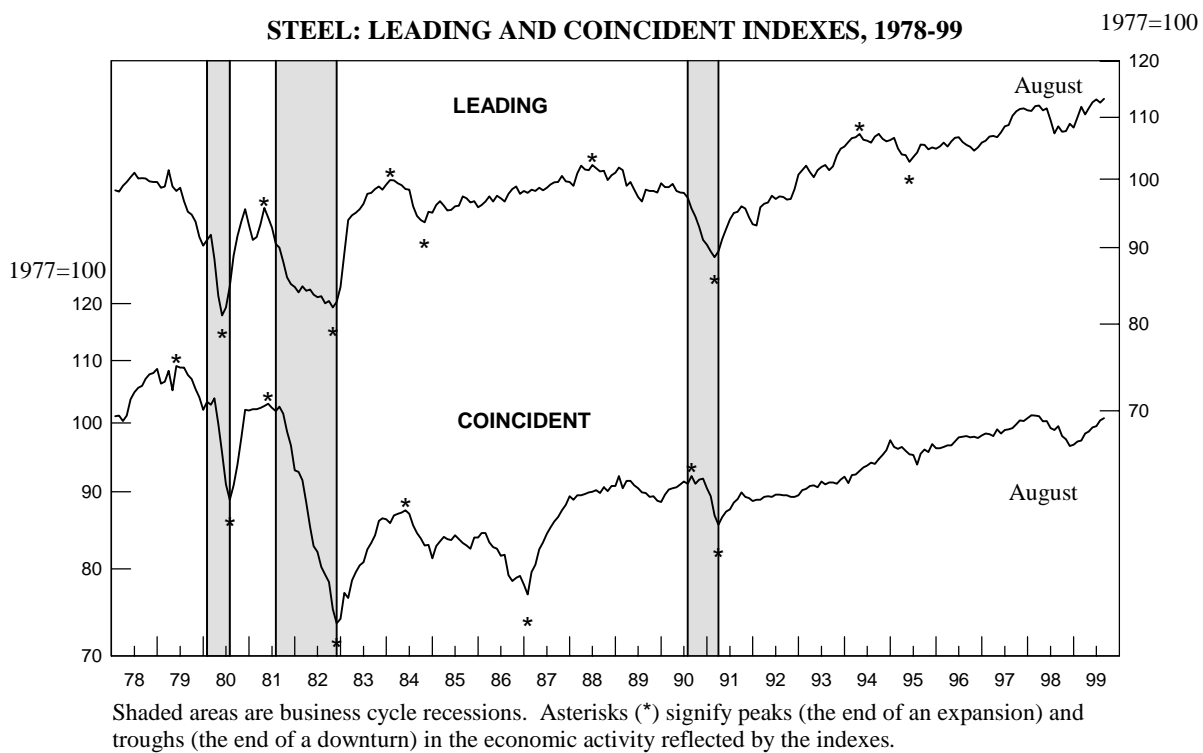
**Table 5.**  
**The Contribution of Each Steel Index Component to the Percent Change in the Index from the Previous Month**

<b>Leading Index</b>	<b>July</b>	<b>August</b>
1. Average weekly hours, blast furnaces and basic steel products (SIC 331)	0.0r	-0.1
2. New orders, steel works, blast furnaces, and rolling and finishing mills, 1982\$, (SIC 331)	0.0r	0.1
3. Shipments of household appliances, 1982\$	0.2	0.1
4. S&P stock price index, steel companies	0.3	-0.2
5. Industrial production index for automotive products	-0.4r	0.6
6. Growth rate of the price of steel scrap (#1 heavy melting, \$/ton)	0.1	0.4
7. Index of new private housing units authorized by permit	0.0	-0.1
8. Growth rate of U.S. M2 money supply, 1992\$	-0.3r	-0.3
9. Purchasing Managers' Index	-0.4	0.1
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	-0.5r	0.6
<b>Coincident Index</b>		
1. Industrial production index, basic steel and mill products (SIC 331)	0.4r	0.1
2. Value of shipments, steel works, blast furnaces, and rolling and finishing mills (SIC 331), 1982\$	0.2r	0.3
3. Total employee hours, blast furnaces and basic steel products (SIC 331)	0.2r	-0.1
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	0.9r	0.4

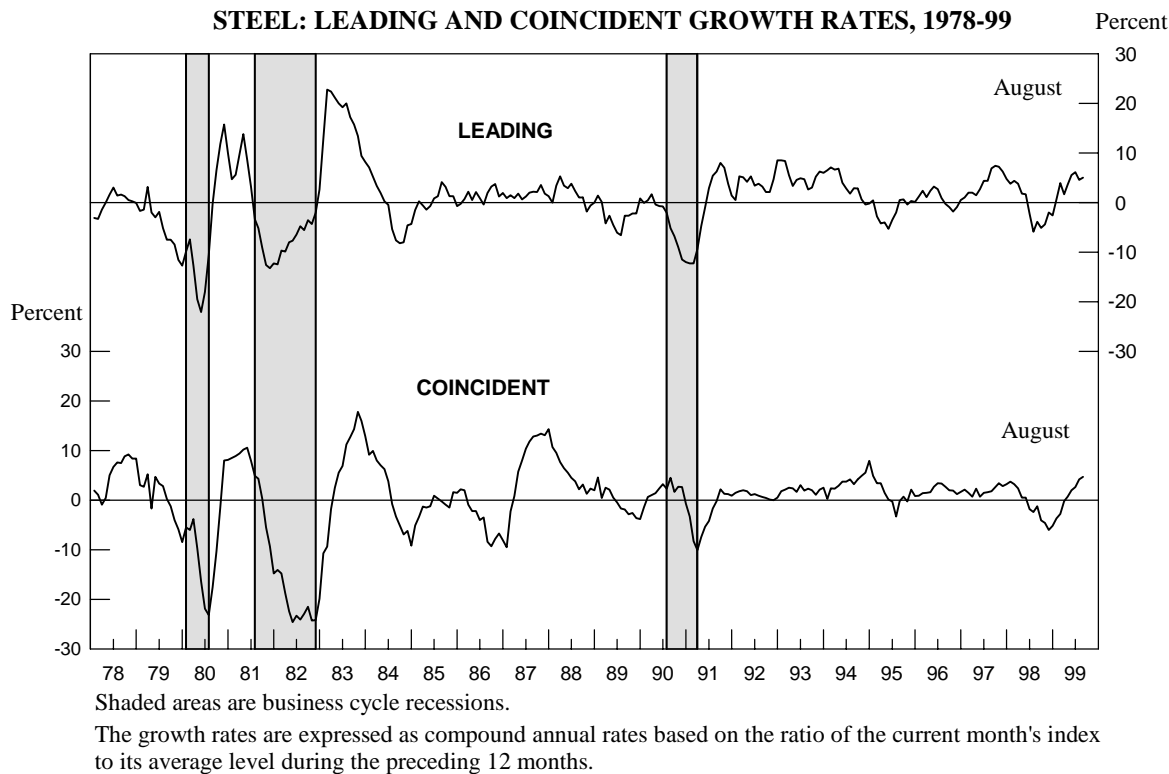
**Sources:** Leading: 1, Bureau of Labor Statistics; 2, Bureau of the Census and U.S. Geological Survey; 3, Bureau of the Census and U.S. Geological Survey; 4, Standard & Poor's; 5, Federal Reserve Board; 6, Journal of Commerce and U.S. Geological Survey; 7, Bureau of the Census and U.S. Geological Survey; 8, Federal Reserve Board, Conference Board, and U.S. Geological Survey; and 9, National Association of Purchasing Management. Coincident: 1, Federal Reserve Board; 2, Bureau of the Census and U.S. Geological Survey; 3, Bureau of Labor Statistics and U.S. Geological Survey. All series are seasonally adjusted, except 4 and 6 of the leading index.

*r: Revised*

**CHART 4.**  
**STEEL: LEADING AND COINCIDENT INDEXES, 1978-99**



**CHART 5.**  
**STEEL: LEADING AND COINCIDENT GROWTH RATES, 1978-99**



**Table 6.**  
**The Aluminum Mill Products Industry Indexes and Growth Rates**

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
<b>1998</b>				
September	155.2	3.1	141.1	0.1
October	154.3	1.6	137.9	-4.0
November	152.5	-0.7	136.7	-5.1
December	154.7	1.8	135.5	-6.1
<b>1999</b>				
January	155.3	2.3r	136.9	-3.8
February	154.7	1.4	136.8	-3.3
March	156.1	3.1	139.7	1.1
April	156.0	2.7	139.6	0.9
May	157.7r	4.4r	140.4r	2.0r
June	159.2r	5.7r	141.6r	3.5r
July	158.3r	3.7r	141.4r	3.1r
August	158.1	2.7	142.4	4.6

*r: Revised*

**Note:** Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

**Table 7.**  
**The Contribution of Each Aluminum Mill Products Index Component to the Percent Change in the Index from the Previous Month**

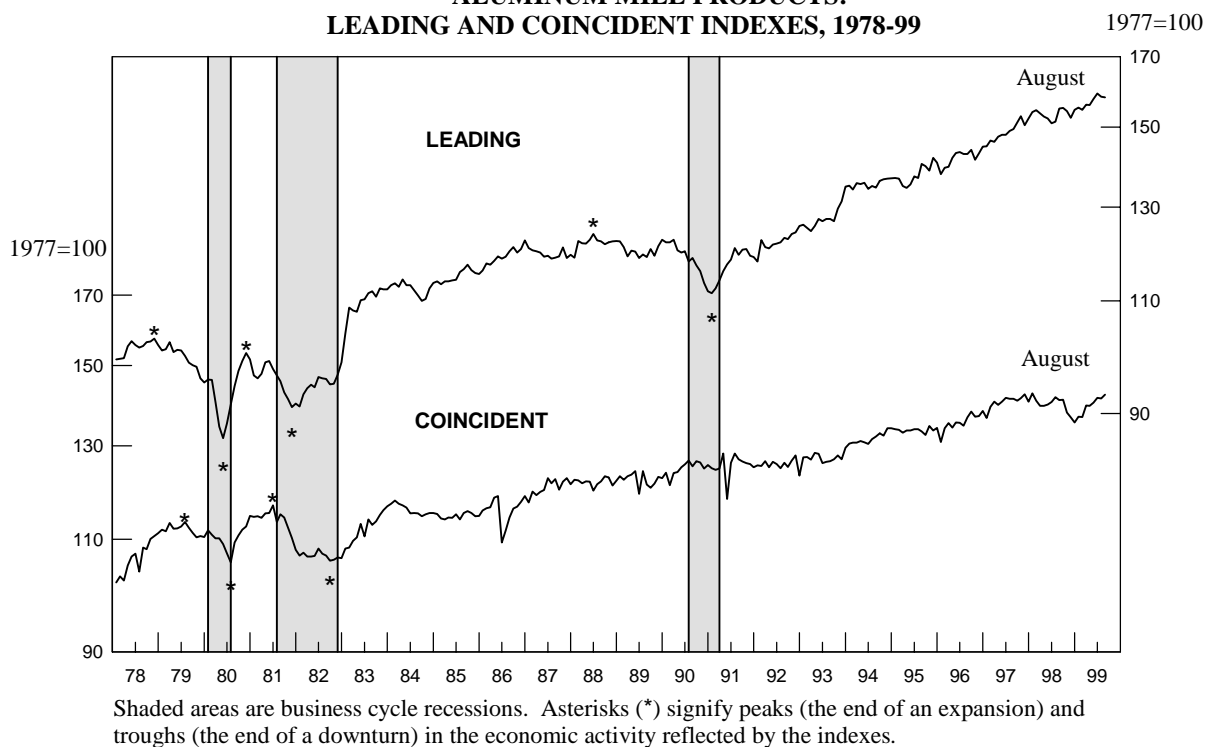
<b>Leading Index</b>	<b>July</b>	<b>August</b>
1. Average weekly hours, aluminum sheet, plate, and foil (SIC 3353)	0.6	-0.3
2. Index of new private housing units authorized by permit	0.0	-0.1
3. Industrial production index for automotive products	-0.5	0.8
4. Construction contracts, commercial and industrial (square feet)	0.1	-0.1
5. Net new orders for aluminum mill products (pounds)	0.0	-0.3
6. Growth rate of U.S. M2 money supply, 1992\$	-0.4r	-0.3
7. Purchasing Managers' Index	-0.5	0.1
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	-0.6r	-0.1
<b>Coincident Index</b>		
1. Industrial production index, aluminum sheet, plate, and foil (SIC 3353)	-0.1r	0.1
2. Total employee hours, aluminum sheet, plate, and foil (SIC 3353)	-0.2r	0.5
Trend adjustment	0.2	0.2
Percent change (except for rounding differences)	-0.1	0.8

**Sources:** Leading: 1, Bureau of Labor Statistics; 2, Bureau of the Census and U.S. Geological Survey; 3, Federal Reserve Board; 4, F.W. Dodge, Division of McGraw-Hill Information Systems Company; 5, The Aluminum Association, Inc. and U.S. Geological Survey; 6, Federal Reserve Board, Conference Board, and U.S. Geological Survey; 7, National Association of Purchasing Management. Coincident: 1, Federal Reserve Board; 2, Bureau of Labor Statistics and U.S. Geological Survey. All series are seasonally adjusted.

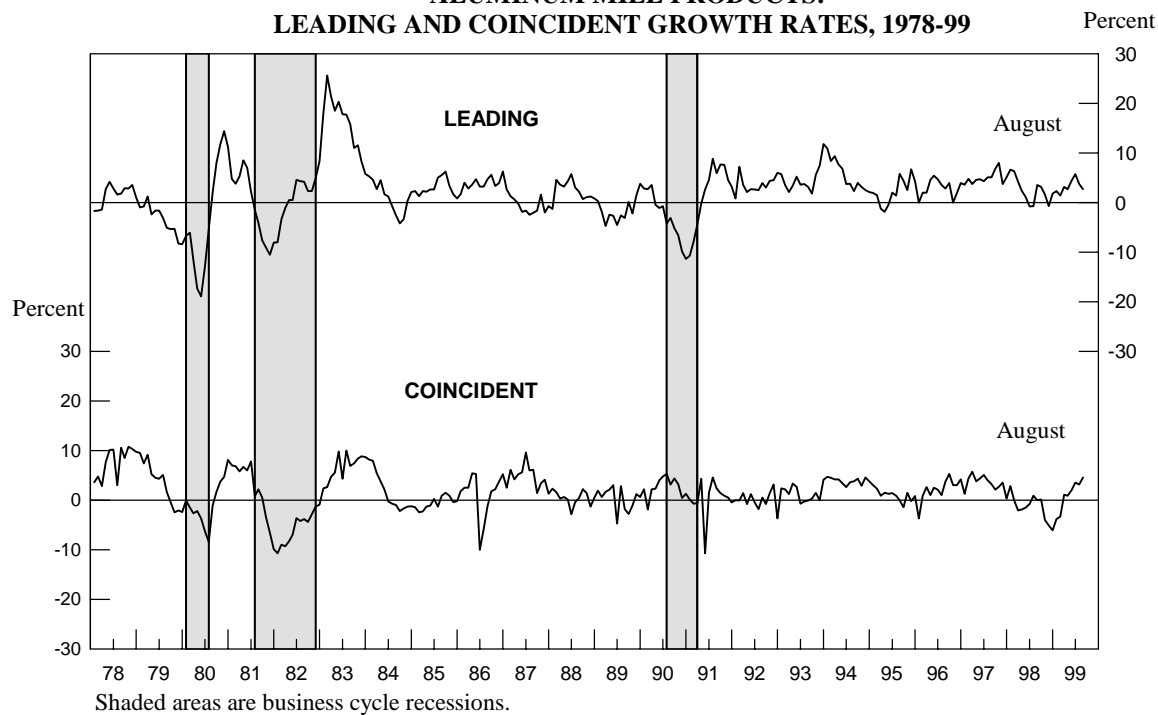
*r: Revised*



**CHART 6.  
ALUMINUM MILL PRODUCTS:  
LEADING AND COINCIDENT INDEXES, 1978-99**



**CHART 7.  
ALUMINUM MILL PRODUCTS:  
LEADING AND COINCIDENT GROWTH RATES, 1978-99**



The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

**Table 8.**  
**The Copper Industry Indexes and Growth Rates**

	Leading Index		Coincident Index	
	(1977 = 100)	Growth Rate	(1977 = 100)	Growth Rate
<b>1998</b>				
September	127.1	-0.5	124.9	0.2
October	126.9	-0.4	125.3	0.8
November	130.3	4.6	126.0	1.6
December	130.4	4.2	125.7	1.0
<b>1999</b>				
January	130.8	4.3	123.7	-2.0
February	129.2	1.5	123.5	-1.9
March	128.5	0.2	124.1	-1.0
April	130.5	2.8r	124.1	-0.8
May	130.4	2.3	122.4	-3.2
June	132.3r	4.7r	121.7	-4.2r
July	133.0r	5.2r	122.3r	-2.9r
August	132.5	3.9	121.8	-3.3

*r: Revised*

**Note:** Growth rates are expressed as compound annual rates based on the ratio of the current month's index to the average index during the preceding 12 months.

**Table 9.**  
**The Contribution of Each Copper Index Component to the Percent Change in the Index from the Previous Month**

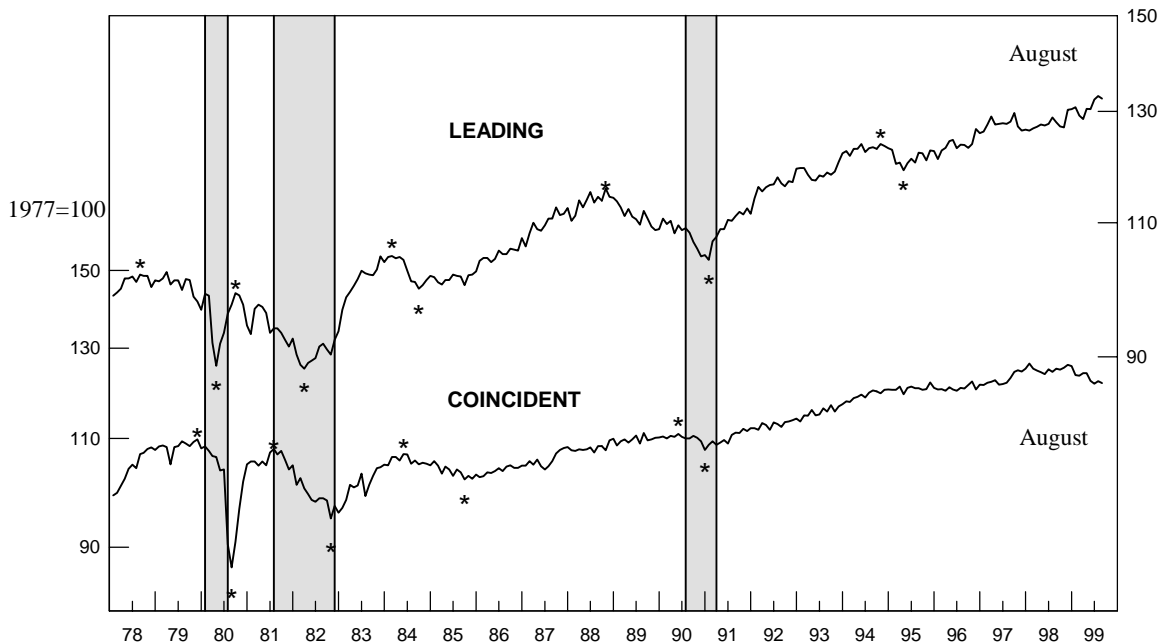
<b>Leading Index</b>	<b>July</b>	<b>August</b>
1. Average weekly overtime hours, rolling, drawing, and extruding of copper (SIC 3351)	0.2	0.1
2. New orders, nonferrous and other primary metals, 1982\$	0.1	-0.4
3. S&P stock price index, building materials companies	0.0	-0.4
4. Ratio of shipments to inventories, electronic and other electrical equipment (SIC 36)	0.5r	0.0
5. LME spot price of primary copper	0.0	0.2
6. Index of new private housing units authorized by permit	0.0	-0.1
7. Spread between the U.S. 10-year Treasury Note and the Federal Funds rate	-0.3	0.1
Trend adjustment	0.0	0.0
Percent change (except for rounding differences)	0.5r	-0.5
<b>Coincident Index</b>		
1. Industrial production index, primary smelting and refining of copper (SIC 3331)	0.0r	-0.1
2. Total employee hours, rolling, drawing, and extruding of copper (SIC 3351)	0.3	0.4
3. Copper refiners' shipments (short tons)	0.2r	-0.8
Trend adjustment	0.1	0.1
Percent change (except for rounding differences)	0.6r	-0.4

**Sources:** Leading: 1, Bureau of Labor Statistics; 2, Bureau of the Census and U.S. Geological Survey; 3, Standard & Poor's; 4, Bureau of the Census and U.S. Geological Survey; 5, London Metal Exchange; 6, Bureau of the Census and U.S. Geological Survey; 7, Federal Reserve Board and U.S. Geological Survey. Coincident: 1, Federal Reserve Board; 2, Bureau of Labor Statistics; 3, American Bureau of Metal Statistics, Inc. and U.S. Geological Survey. All series are seasonally adjusted, except 3, 5, and 7 of the leading index.

*r: Revised*

**CHART 8.**  
**COPPER: LEADING AND COINCIDENT INDEXES, 1978-99**

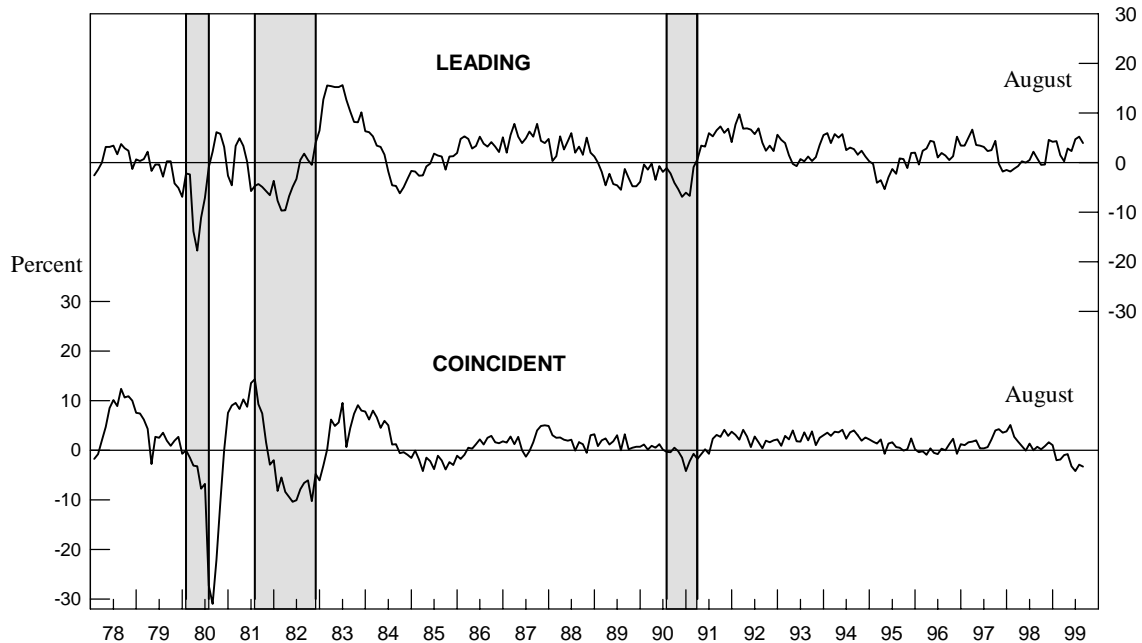
1977=100



Shaded areas are business cycle recessions. Asterisks (\*) signify peaks (the end of an expansion) and troughs (the end of a downturn) in the economic activity reflected by the indexes.

**CHART 9.**  
**COPPER: LEADING AND COINCIDENT GROWTH RATES, 1978-99**

Percent



Shaded areas are business cycle recessions.

The growth rates are expressed as compound annual rates based on the ratio of the current month's index to its average level during the preceding 12 months.

## Explanation

Each month, the U.S. Geological Survey tracks the effects of the business cycle on five U.S. metal industries by calculating and publishing composite indexes of leading and coincident indicators. Wesley Mitchell and Arthur Burns originated the cyclical-indicators approach for the economy as a whole at the National Bureau of Economic Research in the mid-1930's. Over subsequent decades this approach was developed and refined, mostly at the National Bureau, under the leadership of Geoffrey H. Moore.<sup>1</sup>

A business cycle can briefly be described as growth in the level of economic activity followed by a decline succeeded by further growth. These alternating periods of growth and decline do not occur at regular intervals. Composite indexes, however, can help determine when highs and lows in the cycle might occur. A composite index combines cyclical indicators of diverse economic activity into one index, giving decision makers and economists a single measure of how changes in the business cycle are affecting economic activity.

The indicators in the metal industry leading indexes historically give signals several months in advance of major changes in a coincident index, a measure of current metal industry activity. Indicators that make up the leading indexes are, for the most part, measures of anticipations or new commitments to various economic activities that can affect the metal industries in the months ahead.

Composite coincident indexes for the metal industries consist of indicators for production, shipments, and total employee hours worked. As such, the coincident indexes can be regarded as measures of the economic health of the metal industries.

Four of the metal industry coincident indexes, those for primary metals, steel, primary aluminum, and aluminum mill products, reflect their classifications in the U.S. Standard Industrial Classification (SIC). The SIC is the main classification used by the United States government and industry in collecting and tabulating economic statistics. The coincident index for copper is a blend of two different copper industries, primary smelting and refining of copper and rolling, drawing, and extruding of copper.

Of the five metal industries, primary metals is the broadest, consisting of twenty-six different metal processing industries. The steel, aluminum, and copper industries are parts of the primary metals industry.

The metal industry leading indexes turn before their respective coincident indexes an average of 9 months for primary metals and 8 months for steel and copper. The average lead time for the primary aluminum leading index is 6 to 8 months, and the

average lead time for the aluminum mill products leading index is 6 months.

The leading index of metal prices, also published in the *Metal Industry Indicators*, is designed to signal changes in a composite index of prices for primary aluminum, copper, lead, and zinc traded on the London Metal Exchange. On average, this leading index indicates significant changes in price growth about 7 months in advance.

The growth rate used in the *Metal Industry Indicators* is a 6-month smoothed growth rate at a compound annual rate, calculated from a moving average. Moving averages smooth fluctuations in data over time so that trends can be observed. The 6-month smoothed growth rate is based upon the ratio of the latest monthly value to the preceding 12-month moving average.

$$\left[ \left( \frac{\text{current value}}{\text{preceding 12-month moving average}} \right)^{\frac{12}{6.5}} - 1.0 \right] * 100$$

Because the interval between midpoints of the current month and the preceding 12 months is 6.5 months, the ratio is raised to the 12/6.5 power to derive a compound annual rate.

The growth rates measure the near-term industry trends. They, along with other information about the metal industries and the world economy, are the main tools used to determine the outlook of the industries. A 6-month smoothed growth rate above +1.0% usually means increasing growth; a rate below -1.0% usually means declining growth.

**The next summary is scheduled for release on MINES FaxBack at 10:00 a.m. EST, Friday, November 19. Access MINES FaxBack from a touch-tone telephone attached to a fax machine by dialing 703-648-4999. The address for *Metal Industry Indicators* on the World Wide Web is: <http://minerals.usgs.gov/minerals/pubs/mii/>**

The *Metal Industry Indicators* is produced at the U.S. Geological Survey by the Minerals Information Team. The report is prepared by Kenneth Beckman (703-648-4916), e-mail (kbeckman@usgs.gov), and Gail James (703-648-4915), e-mail (gjames@usgs.gov). The Center for International Business Cycle Research, under the direction of Dr. Geoffrey H. Moore, and the former U.S. Bureau of Mines developed the metal industry leading and coincident indexes in the early 1990's. Customers can send mail concerning the *Metal Industry Indicators* to the following address:

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<sup>1</sup>**Business Cycle Indicators, A monthly report from The Conference Board** (March 1996).